

AREOPA

| provoking innovative intelligence

IC Accounting

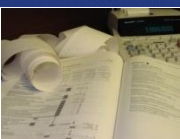
Outlining the Principles of IC Accounting in order to identify
the areas for innovation and sustainable growth
Ludo Pyis
Friday 8th of December 2006



Developed for

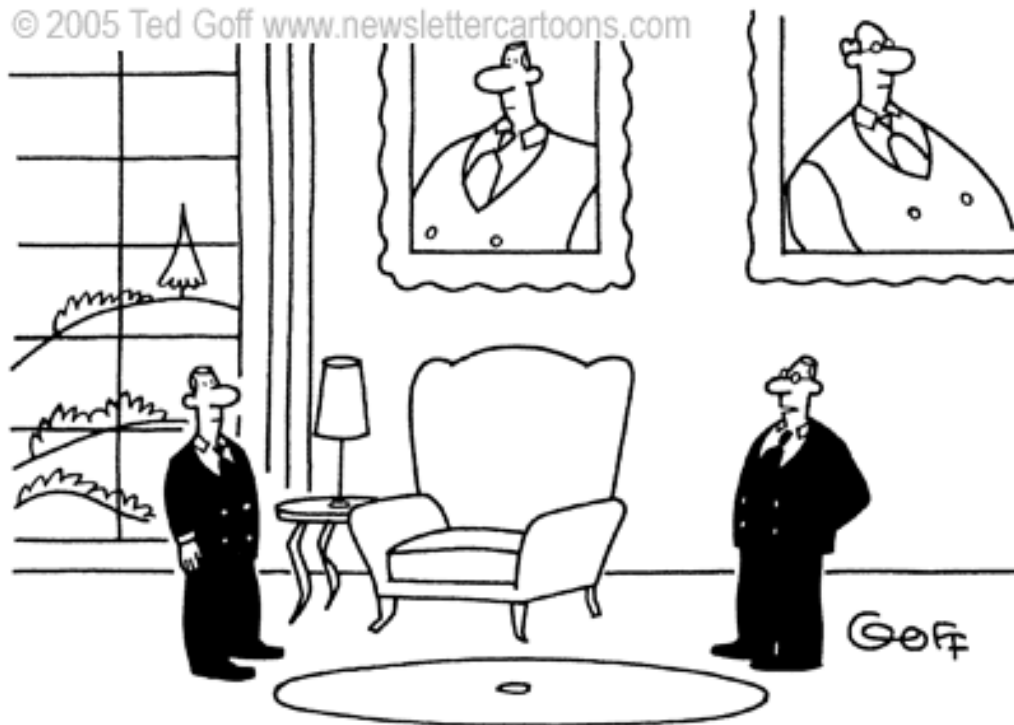


Confidential, not to be disclosed without
written approval of the author(s)



Challenge!

© 2005 Ted Goff www.newslettercartoons.com



“Your job will be to look at things
in a new way and translate them
to the old way for me.”

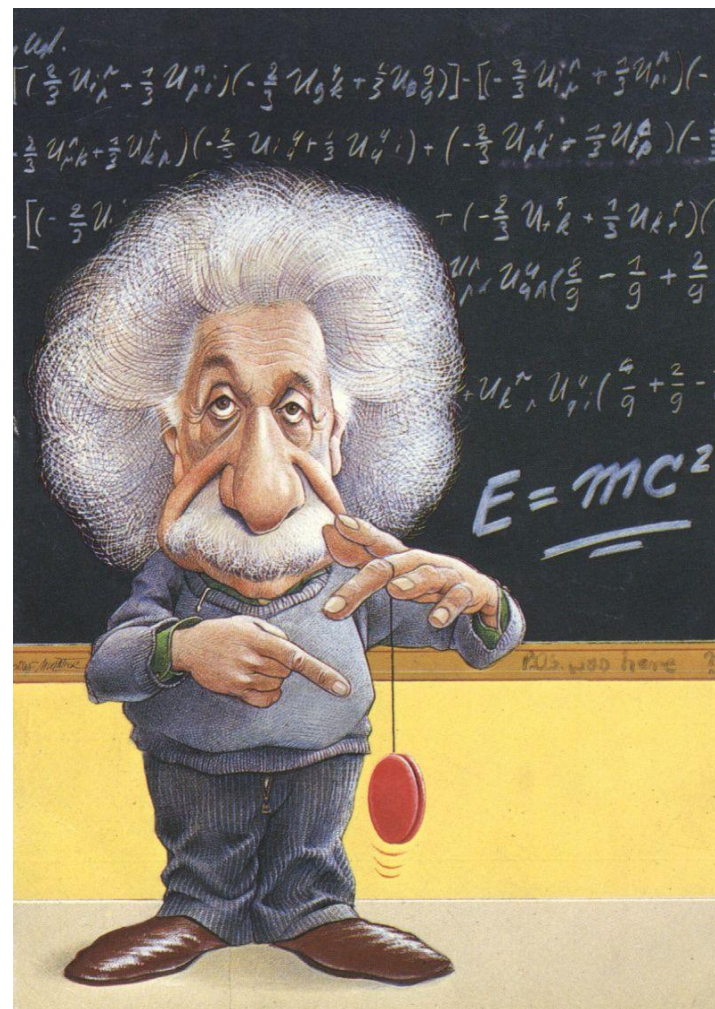




What Is Intellectual Capital?

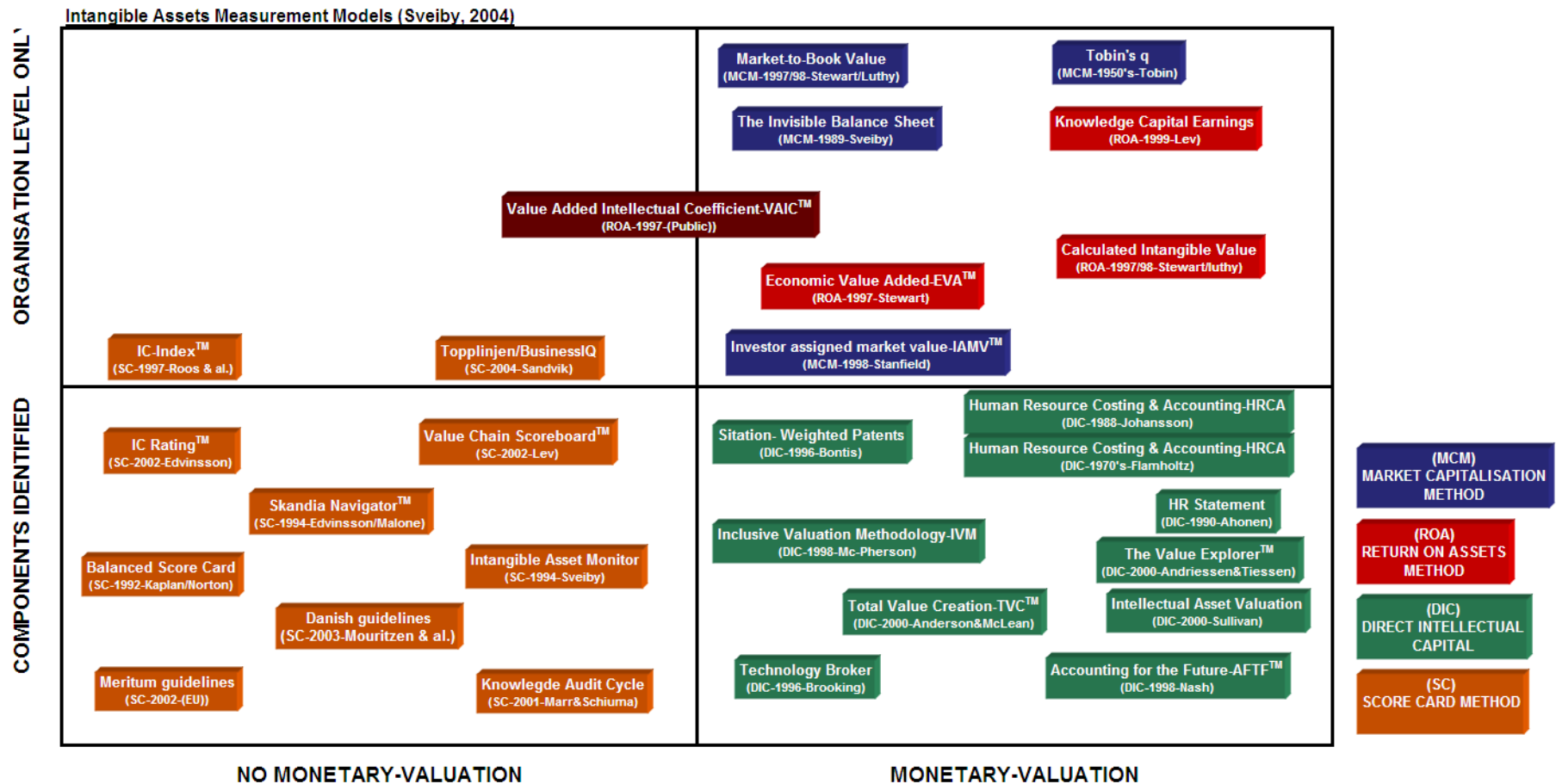
(some illustrations, not definitions)

- ... the sum of an organization's patents, processes, employees' skills, technologies, information about customers and suppliers, and old-fashioned experience ...
- ... an individual's accumulated knowledge and know-how [that] is the source of innovation and regeneration ...
- ... ability, skill, and expertise ... embedded in human brains ...
- ... knowledge that exists in an organization that can be used to create differential advantage ...
(Hugh MacDonald, ICL)
- ... intellectual capital that has been formalized, captured, and leveraged to produce a higher-valued asset ...
(Klein and Prusak)



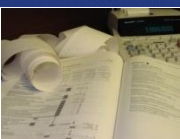


Karl-Erik Sveiby's Model on the Methods for Measuring Intangibles



Copyright Karl-Erik Sveiby 2004

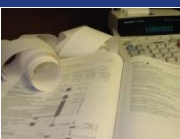




The Four Approaches for Measuring Intangibles

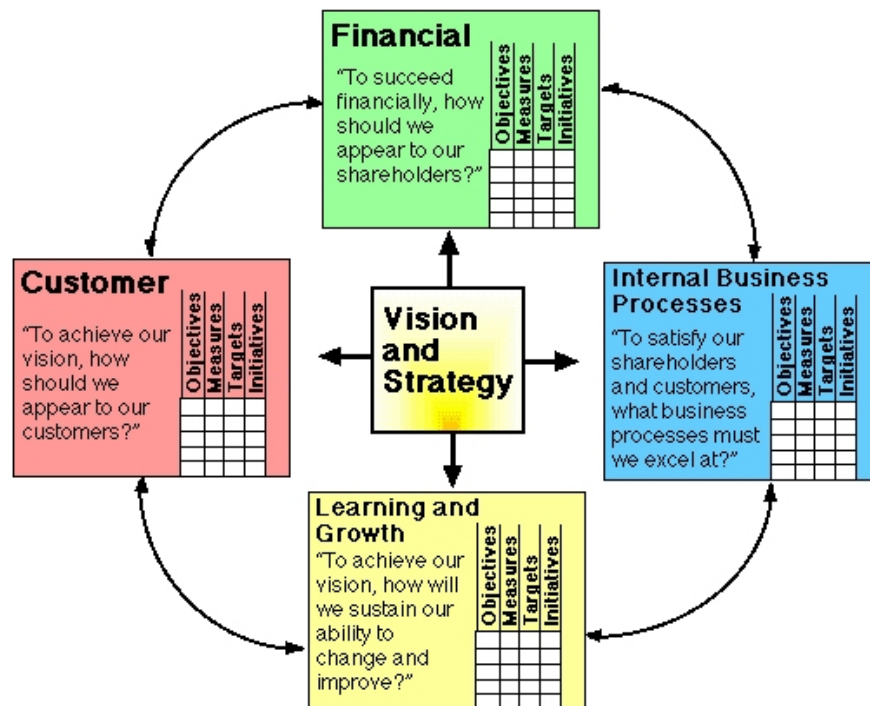
- **Direct Intellectual Capital methods (DIC):** Estimate the \$-value of intangible assets by identifying its various components. Once these components are identified, they can be directly evaluated, either individually or as an aggregated coefficient.
- **Market Capitalization Methods (MCM):** Calculate the difference between a company's market capitalization and its stockholders' equity as the value of its intellectual capital or intangible assets.
- **Return on Assets methods (ROA):** Average pre-tax earnings of a company for a period of time are divided by the average tangible assets of the company. The result is a company ROA that is then compared with its industry average. The difference is multiplied by the company's average tangible assets to calculate an average annual earnings from the intangibles. Dividing the above-average earnings by the company's average cost of capital or an interest rate, one can derive an estimate of the value of its intangible assets or intellectual capital

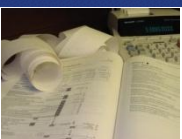




The Four Approaches for Measuring Intangibles

- **Scorecard Methods (SC)**: The various components of intangible assets or intellectual capital are indentified and indicators and indices are generated and reported in scorecards or as graphs.

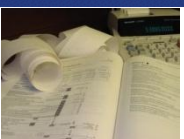




The Fundamental Dilemma

- The main problem with measurement systems is that it is not possible to measure social phenomena with anything close to scientific accuracy
- All measurement systems, *including traditional accounting*, have to rely on proxies, such as dollars, euros, and indicators that are far removed from the actual event or action that caused the phenomenon
- This creates a basic inconsistency between manager's expectations, the promises made by the method developers and what the system can actually achieve and makes the systems very fragile and open to manipulation

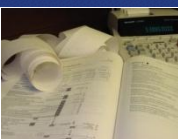




What could it mean for the Accounting World?

- **The importance of Intellectual Capital and Intangible Assets**, the immaterial value of companies such as relationships with business partners, brand awareness (customer/partner capital) and the ability to innovate (e.g. R&D capital), but also the ability to multiply knowledge within the organization (structural capital), **has greatly increased in the last two decades**.
- **Financial accounting** and traditional management **instruments are not able** to **capture** these new values and **report** on them.
- **What is needed is an enhanced concept** for corporate reporting and new management tools that will enable companies **to manage** these new drivers **in a systematic way**.
- This **should enhance** the **capability of investors** to better understand the value and the potential of the hidden intellectual resources of an enterprise in order **to make better judgements** about its capabilities to perform **in the future**.





Intellectual Capital Calculation

Building Blocks – Elements/Phenomena



	Human Capital	Customer Capital	Structural Capital (Organizational Capital)
GUTHRIE (2001)	<ul style="list-style-type: none"> • Know-how; • Education; • Vocational qualification; • Work-related knowledge; • Work-related competencies; • Entrepreneurial spirit • Innovativeness, • Proactive and reactive abilities • changeability 	<ul style="list-style-type: none"> • Brands • Customers • Customer loyalty • Company names • Distribution channels • Business Collaborations • Licensing agreements • Favourable contracts • Franchising agreements 	<ul style="list-style-type: none"> • Patents • Copyrights • Trademarks • Management Philosophy • Corporate Culture • Management processes • Information Systems • Networking Systems • Financial Relations

Source: Adopted from Guthrie (2001), p.35



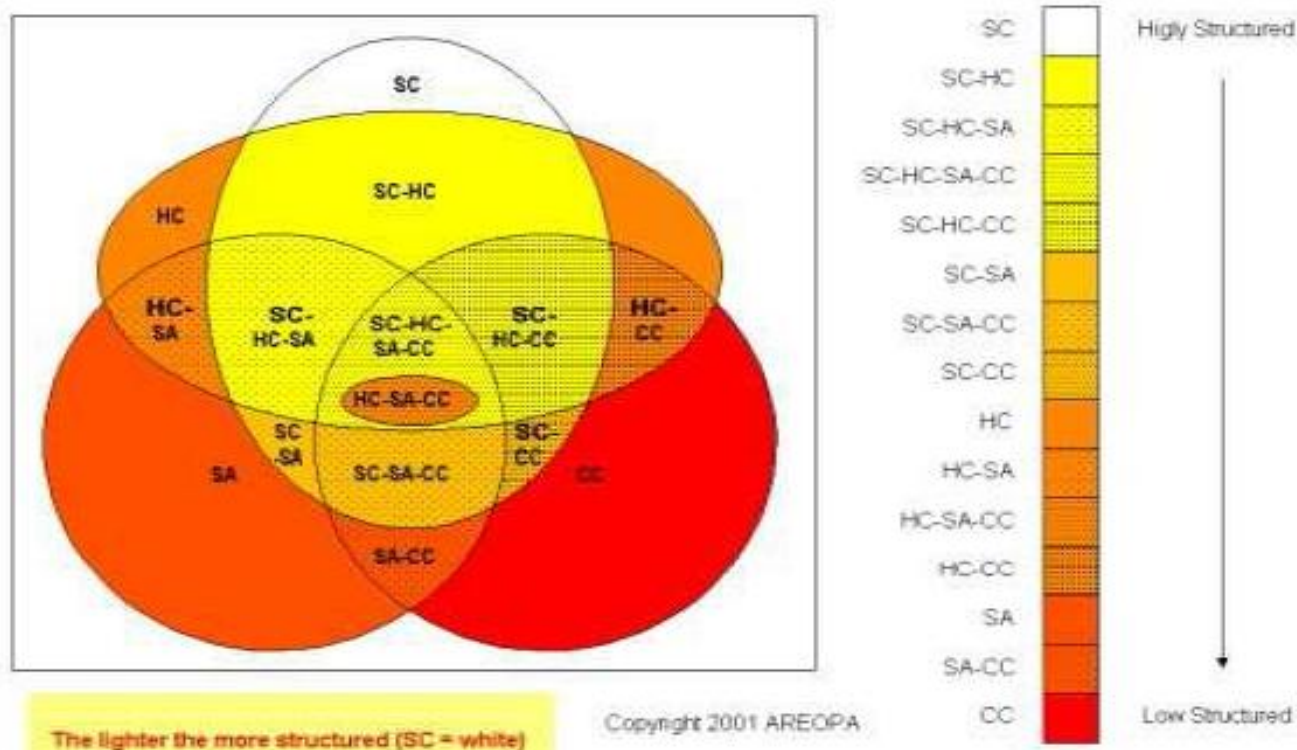
THE MOST VALUABLE CORPORATE BRANDS
CLICK HERE FOR
IN PICTURES





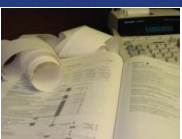
Areopa's 4-Leaf Model®

IC - 4 leaf model - 15 categories

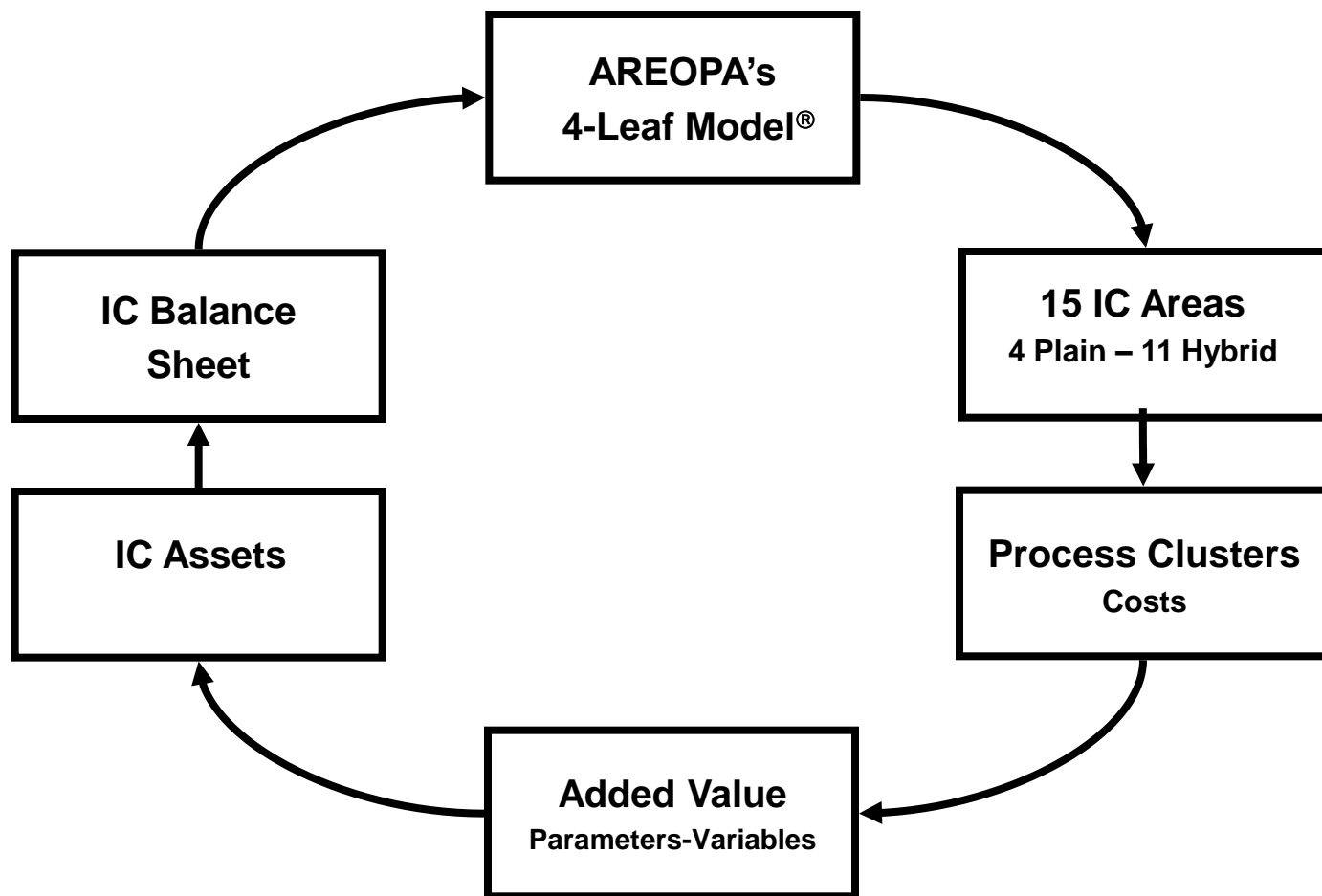


Source: AREOPA Web Presentation, <http://www.areopa.com/>

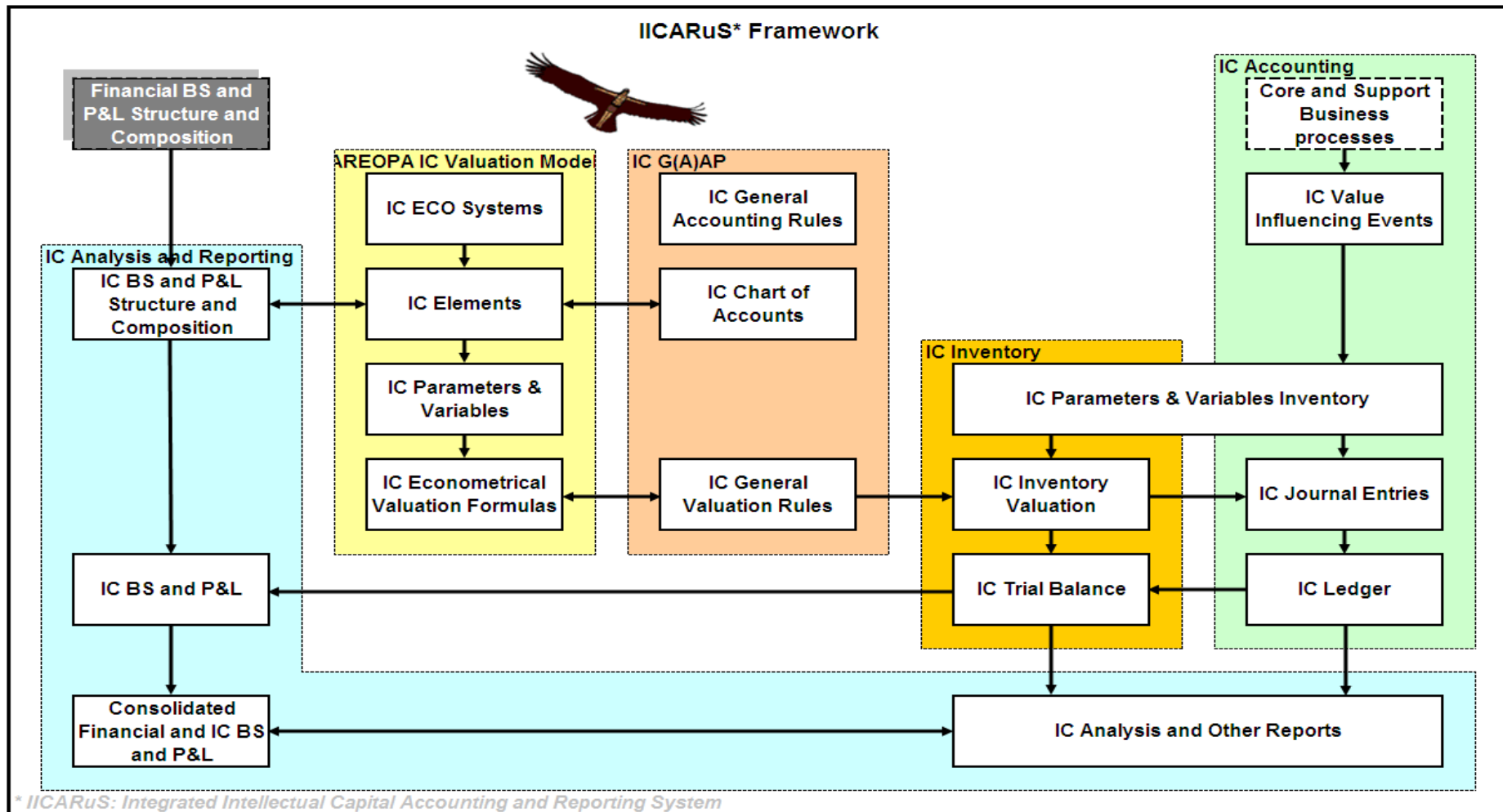


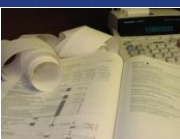


AREOPA's 'Wheel of Fortune'



AREOPA IICARuS™ Framework





International Accounting Standards (IAS)

IAS 36 Impairment of Assets / IAS 38 Intangible Assets

SUMMARY OF IAS 36

Objective

To ensure that assets are carried at no more than their recoverable amount, and to define

Scope

IAS 36 applies to all assets except: [IAS 36.2]

- inventories (see IAS 2)
- assets arising from construction contracts (see IAS 11)
- deferred tax assets (see IAS 12)
- assets arising from employee benefits (see IAS 19)
- financial assets (see IAS 39)
- investment property carried at fair value (see IAS 40)
- certain agricultural assets carried at fair value (see IAS 41)
- insurance contract assets (see IFRS 4)
- assets held for sale (see IFRS 5)

Therefore, IAS 36 applies to (among other assets):

- land
- buildings
- machinery and equipment
- investment property carried at cost
- intangible assets
- goodwill
- investments in subsidiaries, associates, and joint ventures
- assets carried at revalued amounts under IAS 16 and IAS 38

the three critical attributes of an intangible asset are: [IAS 38.8]

- identifiability
- control (power to obtain benefits from the asset)
- future economic benefits (such as revenues or reduced future costs)

Identifiability: An intangible asset is identifiable when it: [IFRS 38.12]

- is separable (capable of being separated and sold, transferred, licensed)
- arises from contractual or other legal rights, regardless of whether those rights are enforceable

Examples of possible intangible assets include:

- computer software
- patents
- copyrights
- motion picture films
- customer lists
- mortgage servicing rights
- licenses
- import quotas
- franchises
- customer and supplier relationships
- marketing rights

Intangibles can be acquired:

- by separate purchase
- as part of a business combination
- by a government grant
- by exchange of assets
- by self-creation (internal generation)

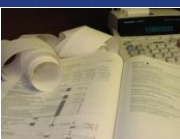


(Financial) Balance Sheet



ABC COMPANY Closing Date Balance Sheet			
Assets		Liabilities and Capital	
Current Assets:		Current Liabilities:	
Cash	0.00	Accounts Payable	0.00
Short-term Investments	0.00	Sales Taxes Payable	0.00
Accounts Receivable	0.00	Payroll Taxes Payable	0.00
Less: Reserve for Bad Debts	0.00	Accrued Wages Payable	0.00
Work in Progress	0.00	Accrued Dividends Payable	0.00
Inventories	0.00	Income Taxes Payable	0.00
Prepaid Expenses	0.00	Unearned Revenues	0.00
Notes Receivable	0.00	Short-Term Notes Payable	0.00
Other:	0.00	Short-Term Bank Loan Payable	0.00
		Other:	0.00
Total Current Assets	0.00	Total Current Liabilities	0.00
Fixed Assets:		Long-Term Liabilities:	
Vehicles	0.00	Long-Term Notes Payable	0.00
Less: Accumulated Depreci	0.00	Mortgage Payable	0.00
Furniture and Fixtures	0.00	Other:	0.00
Less: Accumulated Depreci	0.00		
Equipment	0.00		
Less: Accumulated Depreci	0.00		
Leasehold Improvemei	0.00		
Less: Accumulated Depreci	0.00		
Buildings	0.00		
Less: Accumulated Depreci	0.00		
Land	0.00		
Long-term Investments	0.00		
Total Fixed Assets	0.00	Total Long-Term Liabilities	0.00
Total Current and Fixed Assets	0.00	Total Liabilities	0.00
Other Assets:		Capital:	
Goodwill	0.00	Owner's Equity	0.00
		Accumulated Retained Earnings	0.00
		Current Net Profit (Loss)	0.00
		Less: Dividend	0.00
Total Other Assets	0.00	Total Capital	0.00
TOTAL ASSETS	0.00	TOTAL LIABILITIES AND CAPITAL	0.00





Intellectual Capital Balance Sheet

ABC COMPANY			
Closing Date			
Intellectual Capital Balance Sheet			
Intellectual Capital Assets		Intellectual Capital Liabilities and Equity	
Structural Capital:		Intellectual Capital Liabilities:	
Technological Capital	0.00	Tacit Internal Intellectual Capital Assets	0.00
Organisational Capital	0.00	Tacit External Intellectual Capital Assets	0.00
Total Structural Capital Assets	0.00	Total Intellectual Capital Liabilities	0.00
Human Capital:		Intellectual Capital Equity:	
Total Human Capital Assets	0.00	Explicit Internal Intellectual Capital Assets	0.00
Total Internal Intellectual Capital Assets	0.00	Explicit External Intellectual Capital Assets	0.00
Relational Capital:		Total Intellectual Capital Equity	0.00
Business Capital	0.00		
Social Capital	0.00		
Total External Intellectual Capital Assets	0.00		
TOTAL IC ASSETS	0.00	TOTAL IC LIABILITIES AND EQUITY	0.00

- Assets are either Internal or External and vary from highly structured to not structured at all
- Assets are either owned by the company (explicit) or borrowed from 3rd parties: staff, customers, alliances, partners, public authorities





IC balance sheet: follows the structure logic of the financial BS

		Closing Date		Balance Sheet	
		Assets		Liabilities and Capital	
LIQUIDITY ↑ HIGH ↓ LOW	Current Assets:			Current Liabilities:	
	Total Current Assets	0.00		Total Current Liabilities	0.00
	Fixed Assets:			Long-Term Liabilities:	
	Total Fixed Assets	0.00		Total Long-Term Liabilities	0.00
	Total Current and Fixed Assets	0.00		Total Liabilities	0.00
	Other Assets:			Capital:	
	Total Other Assets	0.00		Total Capital	0.00
	TOTAL ASSETS	0.00		TOTAL LIABILITIES AND CAPITAL	0.00
		ABC COMPANY		Closing Date	
		Intellectual Capital Assets		Intellectual Capital Liabilities and Equity	
STRUCTURED ↑ HIGH ↓ LOW	Structural Capital:			Intellectual Capital Liabilities:	
	Technological Capital	0.00		Tacit Internal Intellectual Capital Assets	0.00
	Organisational Capital	0.00		Tacit External Intellectual Capital Assets	0.00
	Total Structural Capital Assets	0.00		Total Intellectual Capital Liabilities	0.00
	Human Capital:			Intellectual Capital Equity:	
	Total Human Capital Assets	0.00		Explicit Internal Intellectual Capital Assets	0.00
	Total Internal Intellectual Capital Assets	0.00		Explicit External Intellectual Capital Assets	0.00
	Relational Capital:			Total Intellectual Capital Equity	0.00
	Business Capital	0.00			
	Social Capital	0.00			
	Total External Intellectual Capital Assets	0.00			
	TOTAL IC ASSETS	0.00		TOTAL IC LIABILITIES AND EQUITY	0.00



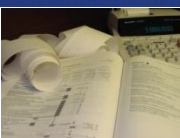


Consolidated Balance Sheet

ABC COMPANY					
Closing Date					
Consolidated Financial & Intellectual Capital Balance Sheet					
Financial & Intellectual Capital Assets			Financial & Intellectual Capital Liabilities and Equity		
LIQUIDITY ↑ HIGH ↓ LOW	Current Assets:		Financial Liabilities:		
	Total Current Assets	0.00	Total Financial Liabilities	0.00	
			Total Financial & Intellectual Capital Liabilities		
	Fixed Assets:		Intellectual Capital Liabilities:		
	Total Fixed Assets	0.00	Total Intellectual Capital Liabilities	0.00	0.00
	Total Current and Fixed Assets	0.00			
	Other Assets:		Intellectual Capital Equity:		
	Internal Intellectual Capital Assets	0.00	Total Intellectual Capital Equity	0.00	
	External Intellectual Capital Assets	0.00	Financial Equity:		
	Total Intellectual Capital Assets	0.00	Total (Financial) Equity	0.00	0.00
		Total Financial & Intellectual Capital Equity		0.00	
		TOTAL LIABILITIES AND EQUITY		0.00	
	TOTAL ASSETS	0.00			
This is what a buyer would probable pay cash for the company.					
This is what the buyer would hold back and pay over a period of time.					

- Consolidated Balance Sheet shows the total value of the enterprise, combining financial with IC elements
- The assets side gives a clear insight into the relative values of ALL assets, offering THE ultimate management tool to managers
- The liabilities side shows how assets are 'financed', i.e. 'who owns' the assets
- Balance Sheet analytics can be developed in line with BS analysis concepts which already exist for the 'classical' BS





The fundamentals of accounting

Business Processes



Accountable Events



Accounting Transactions



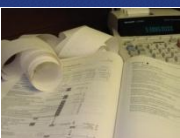
Balance Sheet

Accounting Rules
Valuation Rules
Chart of Accounts

Assets
Liabilities

Financial Reporting



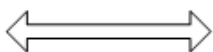


IC Accounting: the same principles apply



Financial
Balance Sheet

Financial Assets
Financial Liabilities



IC
Balance Sheet

IC Assets
IC Liabilities

IC
Reporting

Accounting
Transactions



IC Accounting

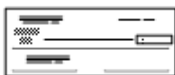
IC Accounting Rules
IC Valuation Rules
IC Chart of Accounts



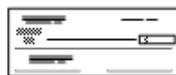
IC Accounting

Fin. Accounting Rules
(Valuation Rules)
Gen. CoA

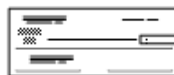
Accountable
Events



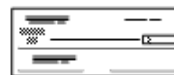
e.g. Training
Session



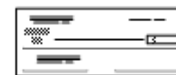
e.g. Alliance
Agreement



e.g. Patent
Registration



e.g. Brand
Evaluation



e.g. Customer
Satisfaction Report

Business
Processes



Management



HR
Management



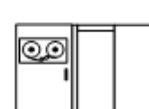
Financial
Management



R&D



Legal



ICT
Management



Purchasing



Goods
Reception



Quality Control



Inventory



Marketing



Sales



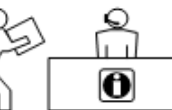
Production



Packaging



Shipment



Customer
Service





Intellectual Capital Valuation: Book Value

(Net) Book Value = (Acquisition Cost + Enhancement Cost(s)) – (Depreciation, Depletion or Amortization) +/- (Value Increase or Value Decrease)

General Accounting

Acquisition Cost or Historical Cost is the actual purchase price plus incidental costs incurred in getting the fixed asset in a condition and position ready for use, possibly supplemented with costs spend to improve, enhance or better the asset at a later stage. If the asset is self-produced: all direct costs (material, labour, expenses) and optionally an appropriate share of overhead costs (fixed, and variable) that can be assigned to the production of the asset.

$$BV = (AC + EC) - D + (VI - VD)$$

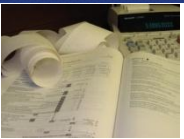
IC Accounting

The book value of IC Assets can be assessed in exactly the same way as for Financial Assets:

Historical Cost is the actual purchase price of the intangible assets which are bought (e.g. software licences, distribution rights, ...) or the costs spend to 'build' an IC asset, such as training costs, R&D costs, marketing costs, etc... These costs can also be subject to depreciation or value adjustments due to special incidents or evolutions. Enhancement Costs are costs to sustain the value of the IC asset without which the value of the IC asset will "vanish" over time.

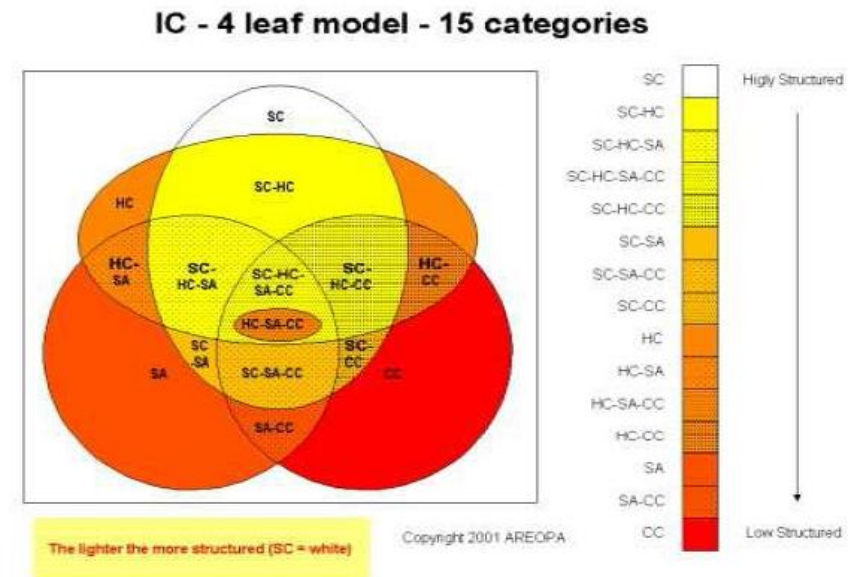
$$BV_{IC} = (AC_{IC} + EC_{IC}) - D_{IC} + (VI_{IC} - VD_{IC})$$





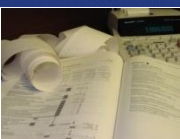
Intellectual Capital Valuation: Future Potential

- In addition to the Book Value of IC Assets we need to add a second portion which expresses the Future Potential (FP) of the IC Asset on hand. This FP will be calculated based on the 77 added value calculation formula's of the AREOPA 4 leaf model .
- If we use the basic resources (see BV) in the businessprocesses they will have to create “ added value “. This added value is calculated by using the 77 formula's



Source: AREOPA Web Presentation, <http://www.areopa.com/>





Areopa's Intellectual Capital Calculation Example – Non Structuralized Human Capital

1 Title Non Structuralized Human Capital

2 Category Unstructuralized Internal Intellectual Capital

3 Location Human Capital
HC

4 Concept description When joining AREOPA a new Areopagite will add value to AREOPA in the following fields:

- Using/having a network
- Using/having experience
- Level of intelligence
- Personality
- Social skills
- Technical skills

For being successful it is important that there is home support. Enough financial backup is necessary (meaning how long can he/she last with no income).

Average earnings
Multiplier

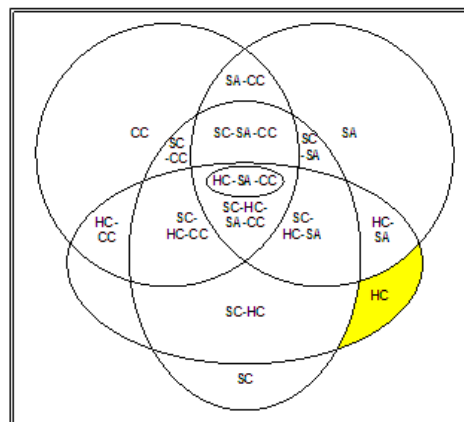
Based on the average earnings or wage of the last 3 years the added value of the new Areopagite is calculated. The average earnings are seen as a cost. The benefits are seen as a multiplier of those average earnings. The multiplier is composed of all elements, mentioned above.

Network

The new Areopagite knows people. Some of them are known to AREOPA, others not. Categorization of the network leads to 3 categories, each with a different weighting factor:

	WF
- A: people at decision making level in large companies with willingness to contact them in first 2 months.	3
- B: people at decision making level or key influencers in medium / small companies with willingness to contact them in first 2 months.	1,5
- C: Only indirect contacts.	1

Persistence factor The anticipated willingness to contact them is measured by the persistence factor (values: 0..1) of the new Areopagite.



AREOPA
provoking innovative intelligence





Areopa's Intellectual Capital Calculation Example – Non Structuralized Human Capital

Experience

	WF
- Implementation consultant using other method	0.8
- Implementation consultant eager to learn	1.2
- Consultant working as conceptual consultant	0.7
- 10 years top management experience regularly worked with consultants with success	1.5
- 10 years top management experience regularly worked with consultants with no success	0.7
- Experience teaching or as a professor	1
- Experience working with groups, trainer, unions, etc.	1.5

Intelligence

	WF
Category 1 (WF=1)	
- transha, mentors	1
- semsha	1.1
- implementation TCM	2
- implementation AIS	4
Category 2 (WF=1.5)	
- network coordinator	3
- SA-manager	2
- short-term sales	1.5
Category 3 (WF=5)	
- lead generator	1
- deal generator	3

Personality

Each Areopagite is quoted for the 5 basic beliefs (value: 0..5)

	WF
entrepreneurial	5
empowerment	4
100% customer driven	3
no hierarchy	2
variable cost thinking	1

The reference is 75 (5 on each belief x WF)

Social skills

Value: 0..5

Technical skills

Value: 0..5

Home Support

Value: 0..1

Financial backup

Value: 0..1

The total is obtained as the sum of all benefits minus costs for all new Areopagite.

5 Formula

Benefits - Costs

BENEFITS = Sum of (Multiplier x Average Earnings)

BENEFITS = Sum of (Network Multiplier x Experience Factor x (Intelligence Category x Intelligence Factor) x Personality Index x Social Skills Index x Technical Skills Index x Home Support Factor x Financial Backup Factor / Reference x Average Earnings)

Network Multiplier = $(3 \times (\#A \text{ new} + 0.8 \times \#A \text{ known}) + 1.5 \times (\#B \text{ new} + 0.8 \times \#B \text{ known}) + (\#C \text{ new} + 0.8 \times \#C \text{ known})) \times \text{Persistence factor}$

COSTS = Sum of Average Earnings

6 Variables

Average Earnings	0.1 mio EUR
Multiplier	3.262
# A new	5
# B new	6
# C new	20
# A known	2
# B known	3
# C known	10
Persistence factor	0.8
Experience factor	1.5
Intelligence Category	1.5
Intelligence Factor	3
Personality	0.65
entrepreneurial	4
empowerment	3
100% customer driven	4
no hierarchy	2
variable cost thinking	1
Social skills	4
Technical skills	3
Home Support Factor	0.8
Financial Backup Factor	0.6
Number of new Areopagite	50

7 Parameters

Reference	100
AKC%	32.5%

8 Calculation

BENEFITS	5.300 mio EURO
COSTS	1.625 mio EURO

VALUE IC 3.675 mio EUR





Intellectual Capital Valuation: Total Value Equation

- Bringing the 2 elements (Book Value (BV) and Future Potential (FP)) together allows us to complete the Total Value Equation of an IC Asset:

$$TV_{IC} = BV_{IC} + FP_{IC}$$

whereby:

$$BV_{IC} = (AC_{IC} + EC_{IC}) - D_{IC} + (VI_{IC} - VD_{IC})$$

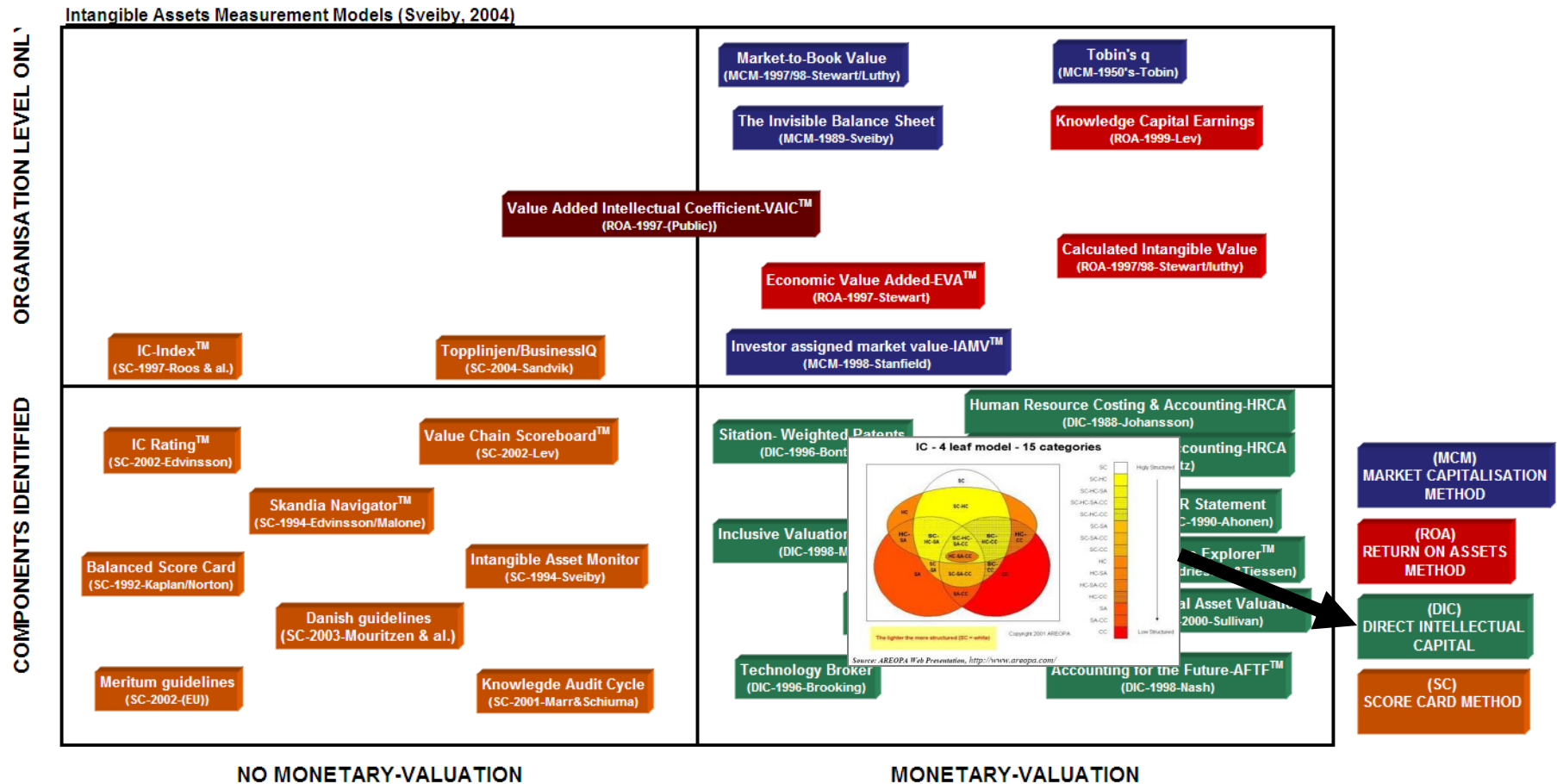
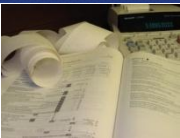
and:

The formula's which calculate the added value of the 77 phenomena's

- Each of these composing elements will have to be assessed, defined and computed while putting together the initial inventory of the IC assets of an organisation in preparation of the calculation of the IC value of all or a set of assets at preset intervals (monthly, quarterly, yearly) or the start of a continuous IC accounting exercise.
- The most difficult part lies in the calculation of the future potential of each of the IC assets, since these potential margin contributions will depend on the nature of each asset and the parameters and variables “driving” the value creating potential of each individual asset.



Areopa's Positioning on Karl-Erik Sveiby's Overview



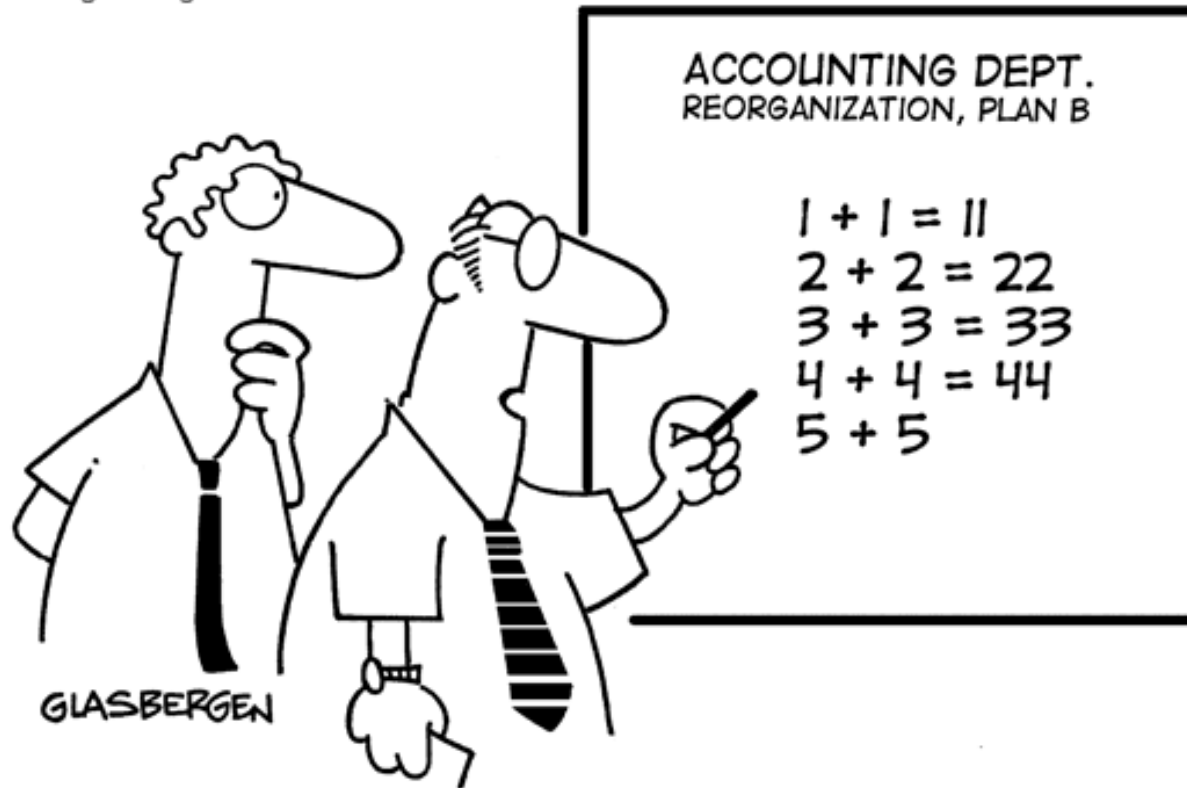
Copyright Karl-Erik Sveiby 2004





The box we have ... the fillings need to be gathered

Copyright 2005 by Randy Glasbergen.
www.glasbergen.com



“For years, we’ve been playing by old rules and the results have been dismal. It’s time for a bold new direction!”



AREOPA

provoking innovative intelligence



CONTACT COORDINATES

AREOPA

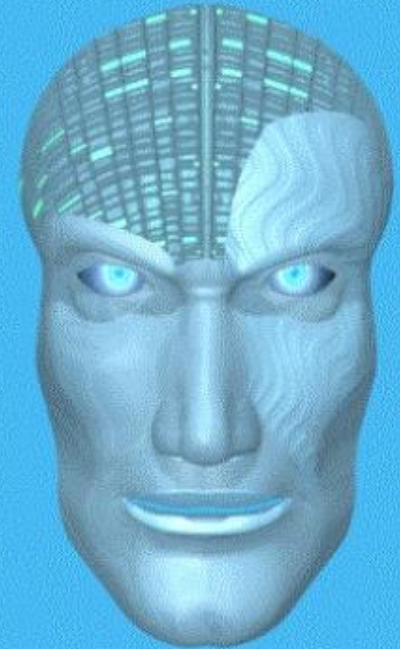
**Koningin Astridlaan 201 B5
B- 2800 MECHELEN
BELGIUM**

Tel.: +32 (0)15 433.217

Fax.: +32 (0)15 411.170

www.areopa.com

info@areopa.com



Ludo PYIS

Mobile: +32 (0)495 213.629

Ludo.pyis@areopa.com

Jan ADRIAENSSEN

Mobile: +32 (0)475 845.920

jan.adriaenssen@areopa.com